Vivitar®

Series 1 Lens

90mm f/2.5 Macro

Parts Manual

ORDER PARTS BY NUMBER
AND DESCRIPTION FROM:

Central Parts Service
Ponder & Best, Inc.
2700 Pennsylvania Ave.
Santa Monica, CA 90404
Phone: (213) 829-3672

Publication No. 746055

Vivitar®

Series 1 Lens — 90mm f/2.5 Macro

PARTS MANUAL

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This Parts Manual contains exploded view drawings and a parts list for the Vivitar Series 1 90mm f2.5 Macro Lens.

References in the drawings are cross-indexed in the parts list to their description and part number. Use the parts list to determine whether a part is available separately or only as an assembly.

N.A.S. — Indicates that the part is Not Available Separately.

A/R — Indicates parts used As Required.

Please note that this manual is based on production data at time of publication, and that details may vary with production changes.

PARTS ORDERS

When ordering parts, please indicate model, description, part number, and quantity.

OPTICAL SPECIFICATIONS

Construction

Main Lens . . . . . 8 elements, 7 groups

Macro Adapter . . . . . 3 elements, 3 groups

Effective Focal Length 90mm

Angle of Acceptance . . . . . 27°

Minimum Focusing Distance From Film Plane

Without Adapter . . . . . 39.2 cm (15.4 in.)

With Adapter . . . . . 35.3 cm (13.9 in.)

Maximum Magnification

Without Adapter 1:2

With Adapter 1:1

MECHANICAL SPECIFICATIONS

Accessory Size 58mm

Weight

Main Lens . . . . . 644 gms (23 oz.)

Macro Adapter . . . . . 292 gms (10 oz.)

Length

Without Adapter . . . . . 9.0 cm (3.5 in.)

With Adapter . . . . . 13.8 cm (5.4 in.)

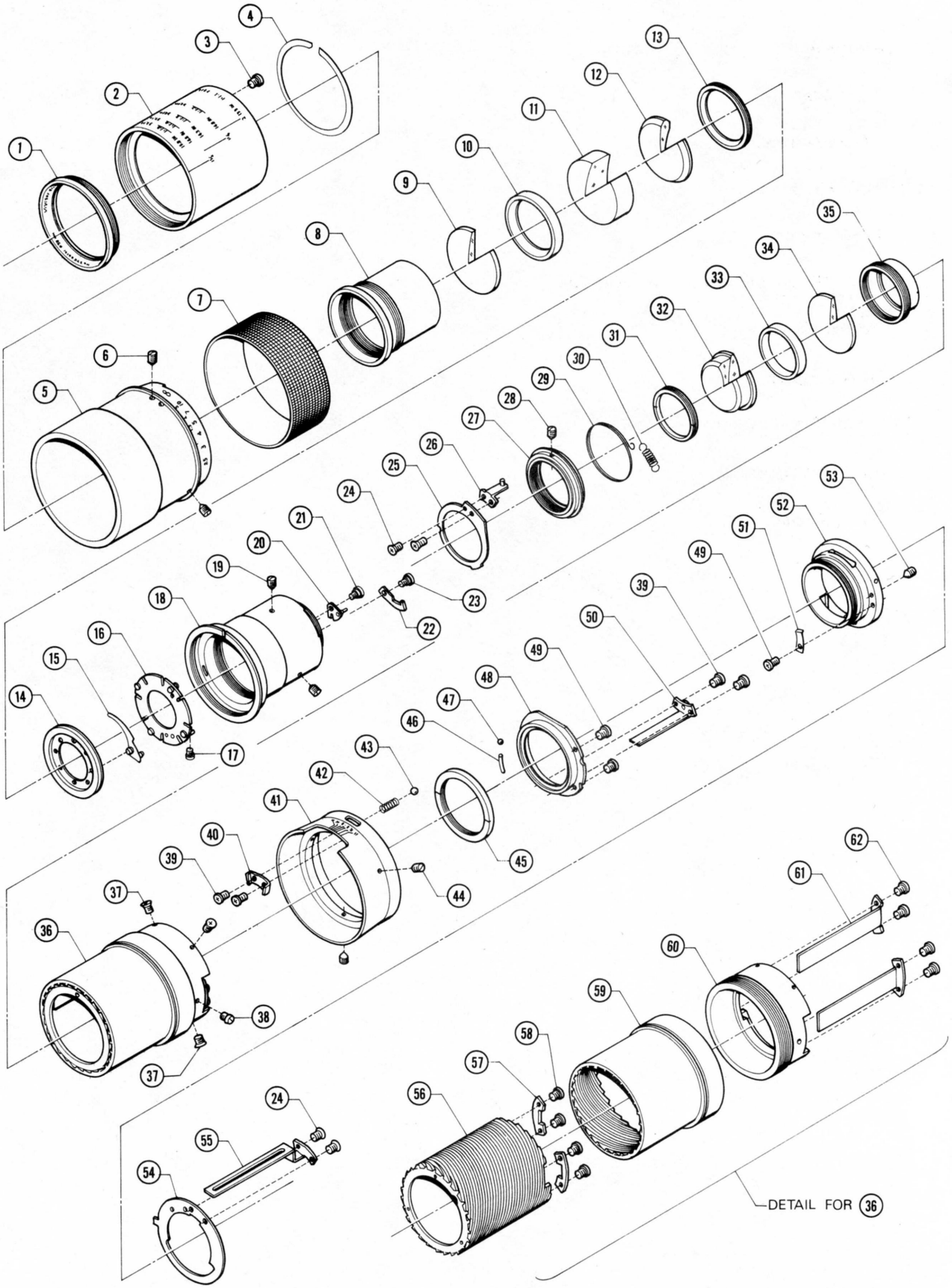
Maximum Barrel Diameter . . . . . 70mm (2.75 in.)

Aperture Range . . . . . f2.5 - f22

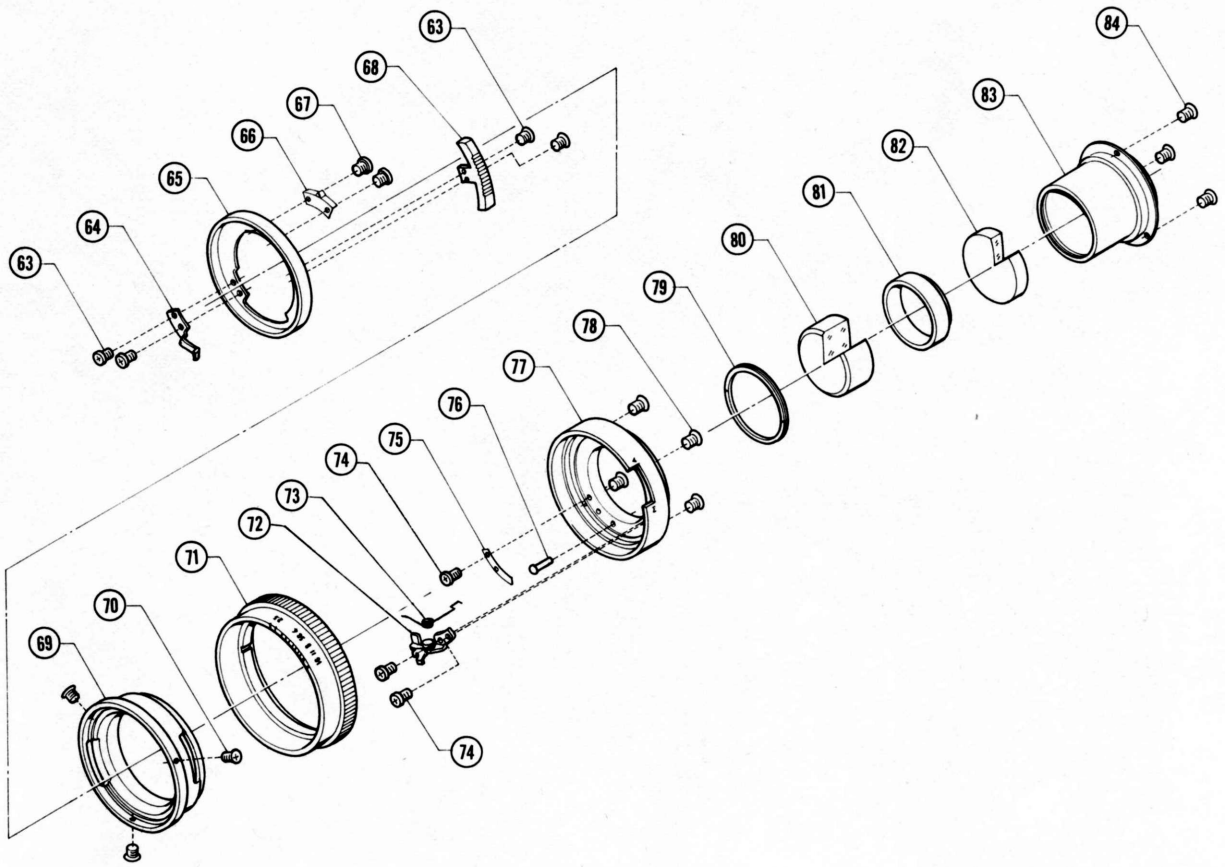
Lens Hood . . . . . Use Vivitar 58mm Lens Hood

VIVITAR SERIES 1 90MM F2.5 MACRO LENS
UNIVERSAL MOUNT

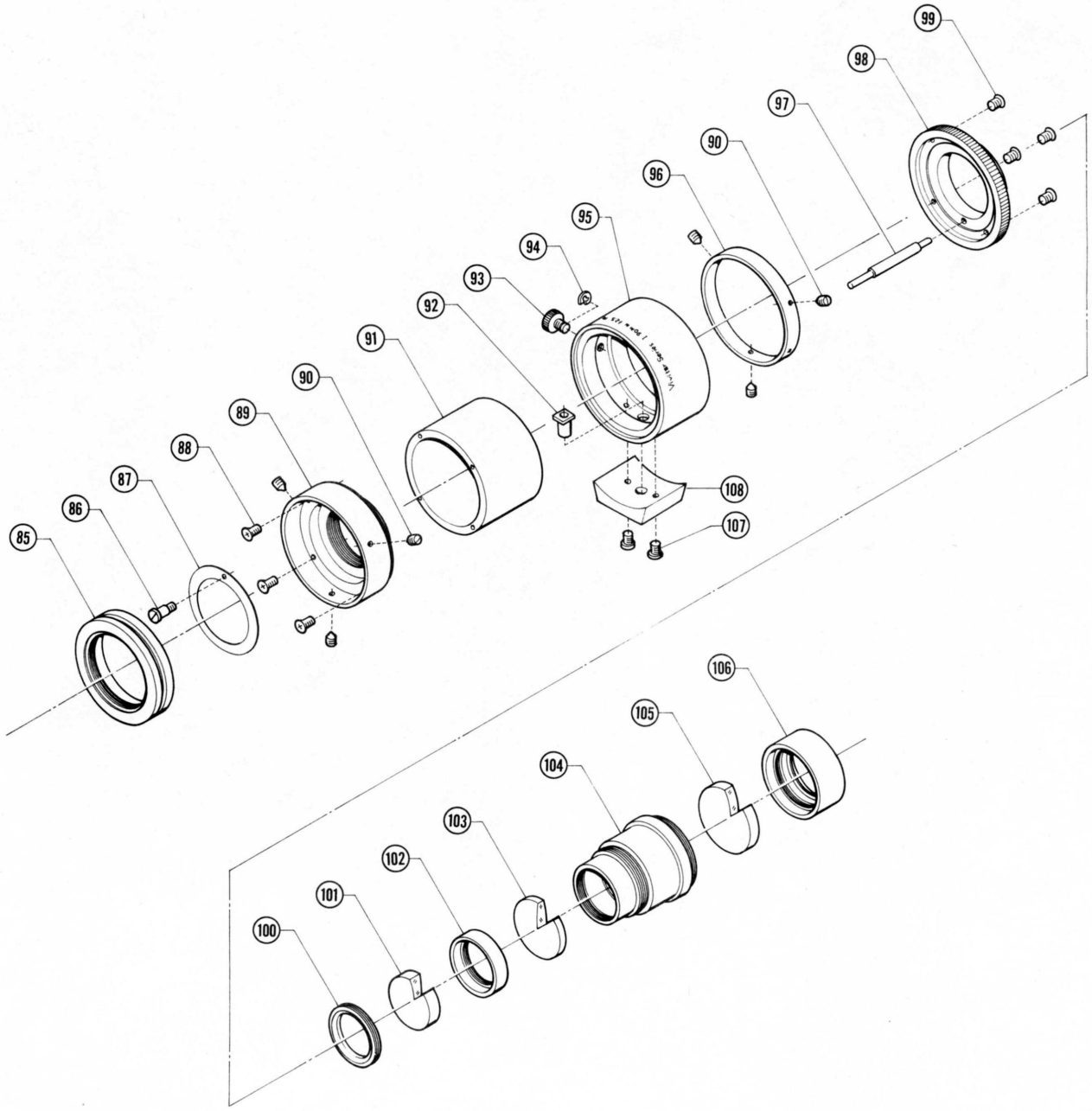
BEGINNING WITH SERIAL NO. 37------



VIVITAR SERIES 1 90MM F2.5 MACRO LENS
UNIVERSAL MOUNT

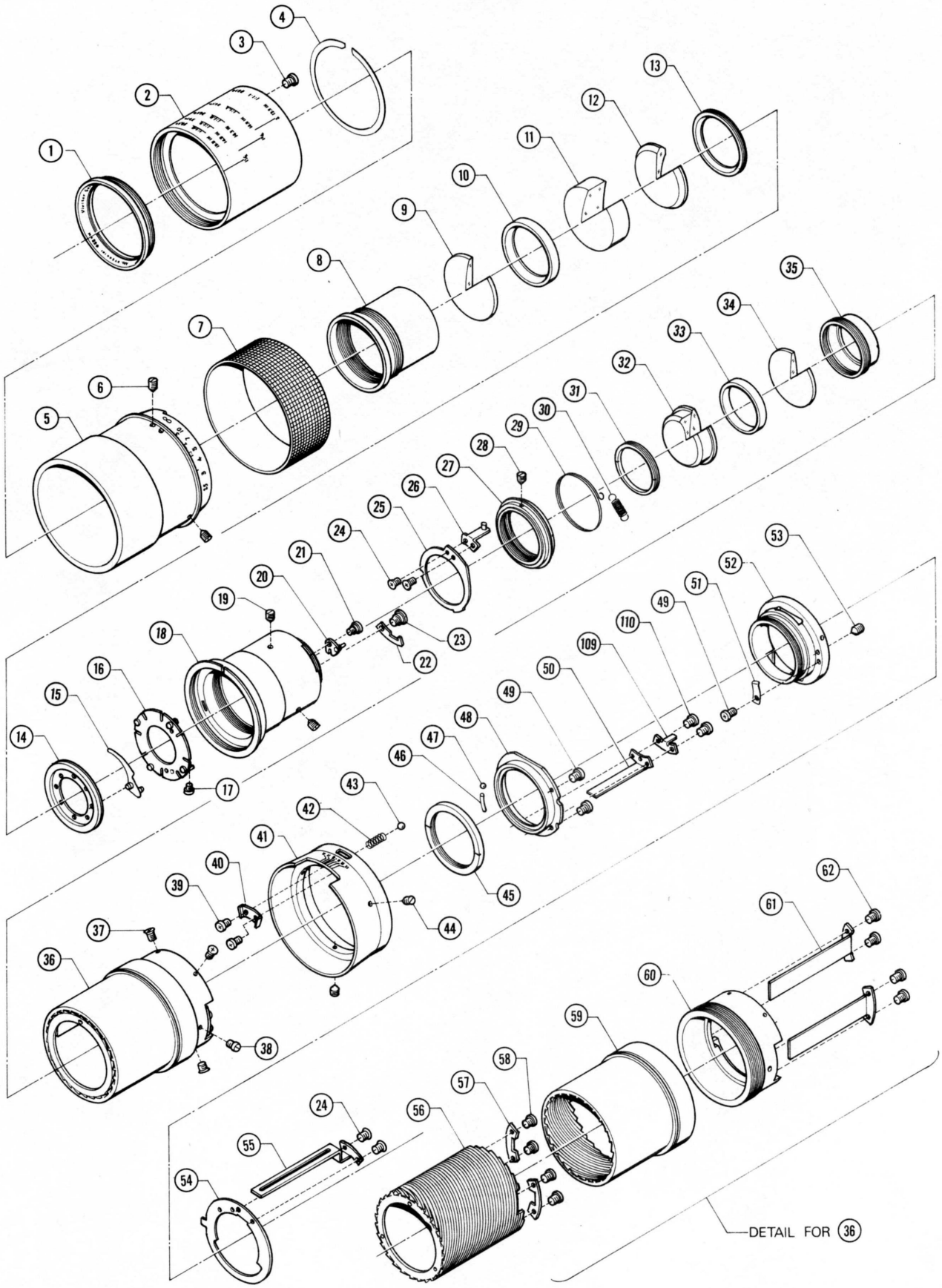


VIVITAR SERIES 1 90MM F2.5 MACRO ADAPTER
UNIVERSAL MOUNT



VIVITAR SERIES 1 90MM F2.5 MACRO LENS

NIKON MOUNT



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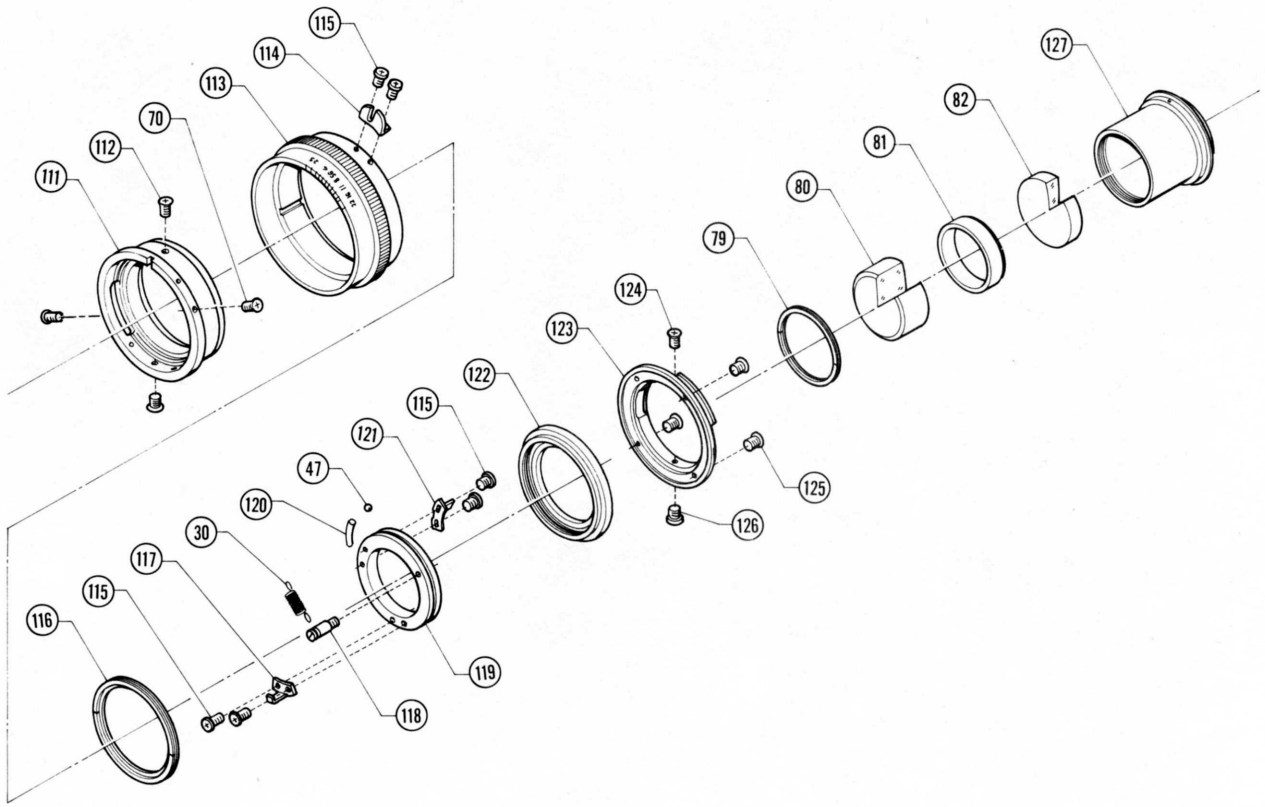
NIKON MOUNT



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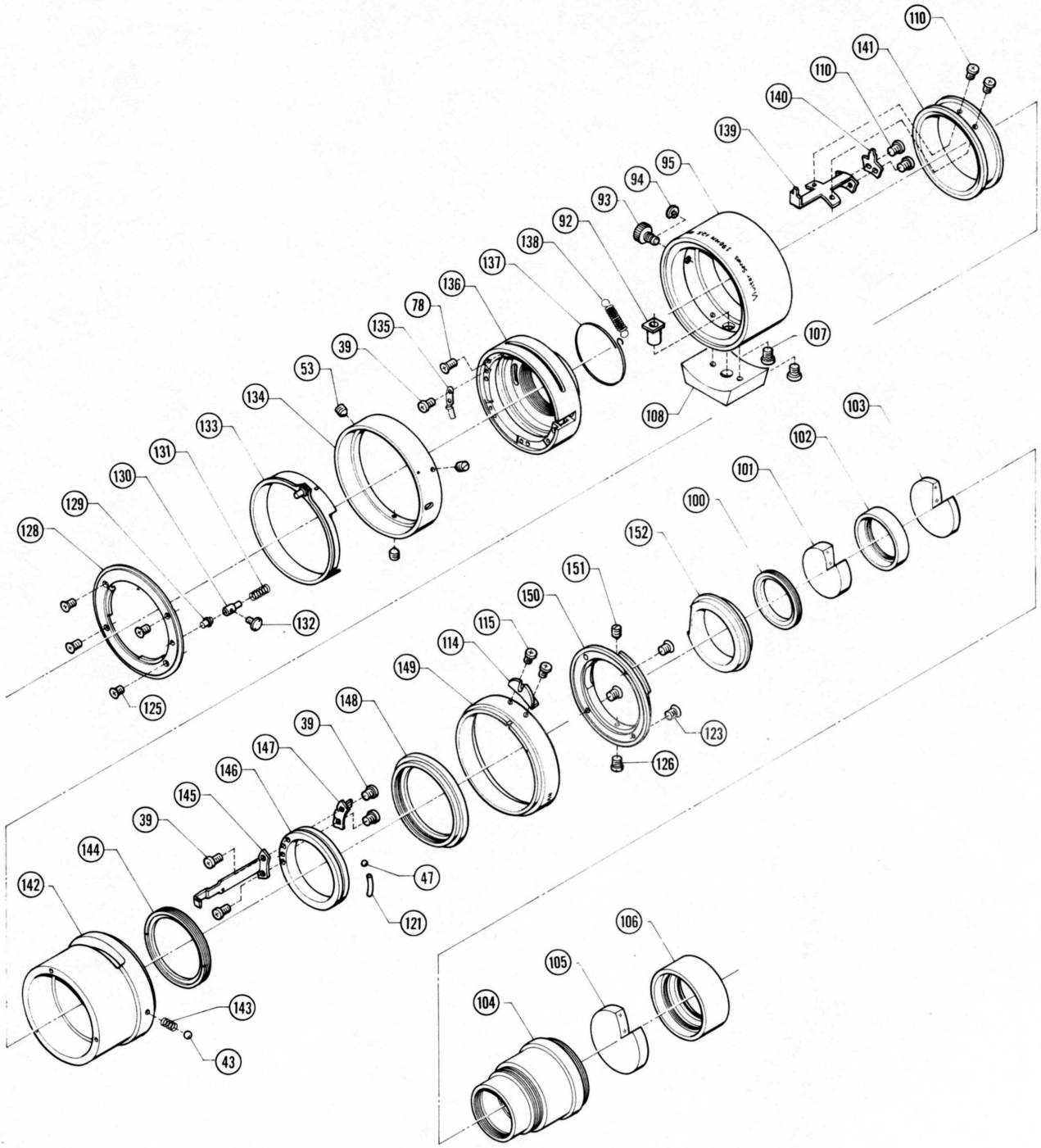
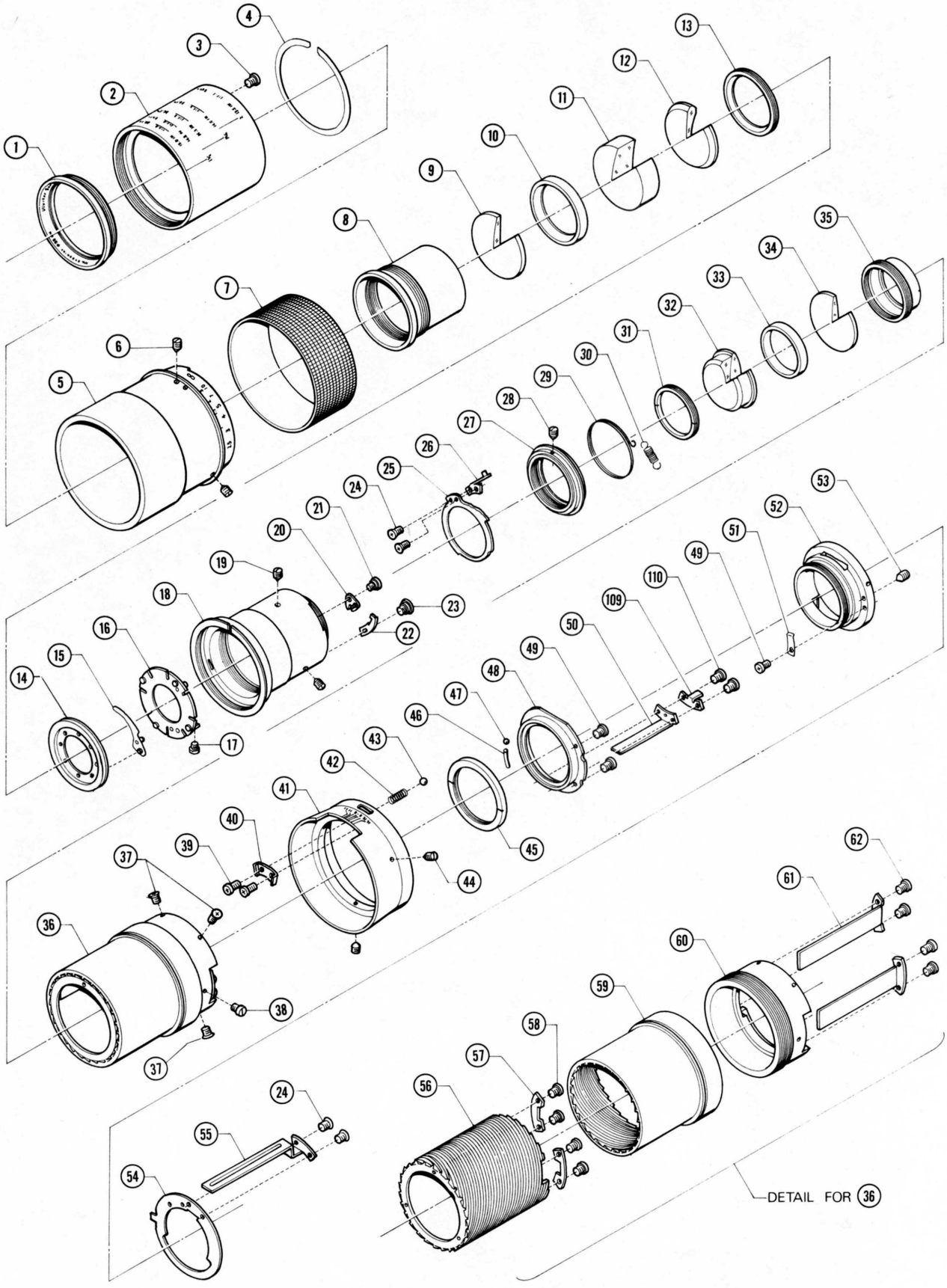
NIKON MOUNT



VIVITAR SERIES 1 90MM F2.5 MACRO LENS
MINOLTA MOUNT



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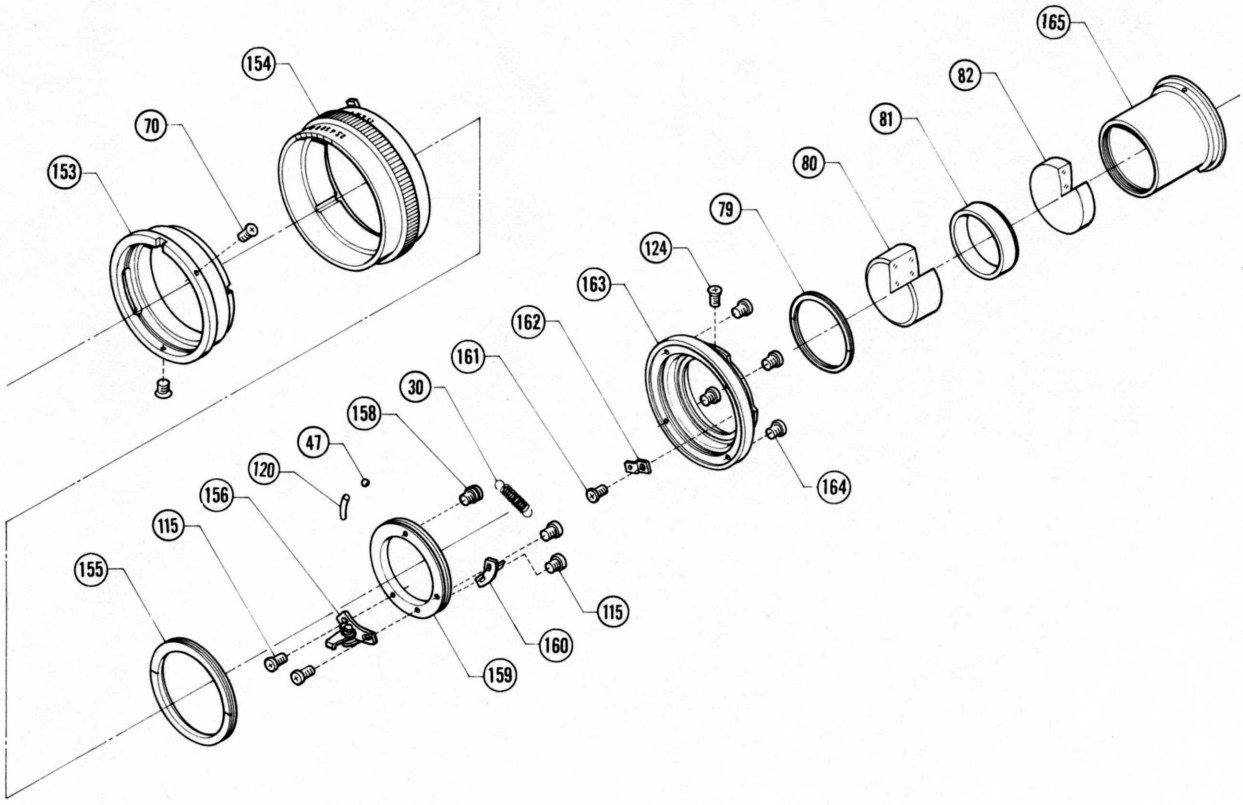
MINOLTA MOUNT



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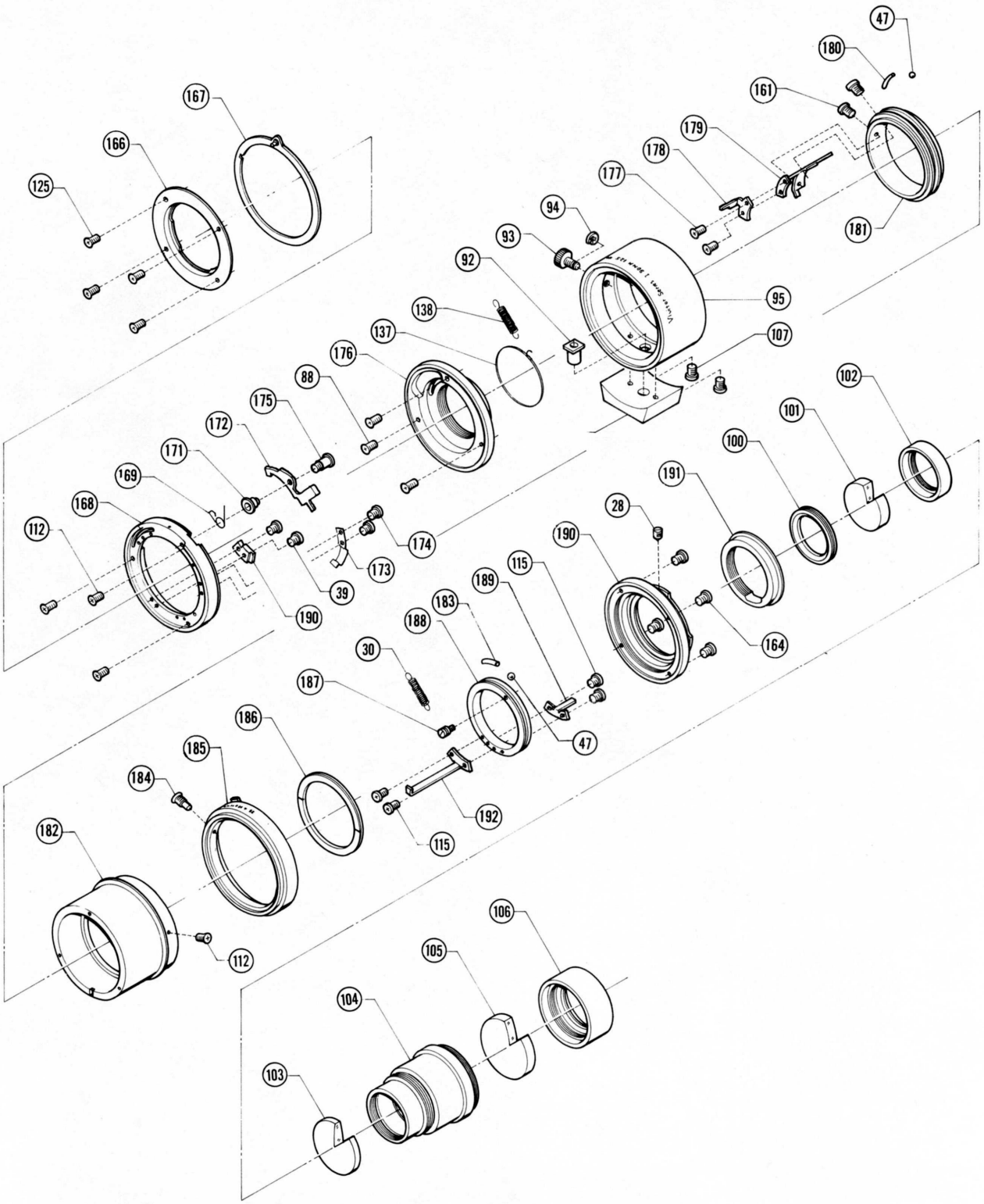
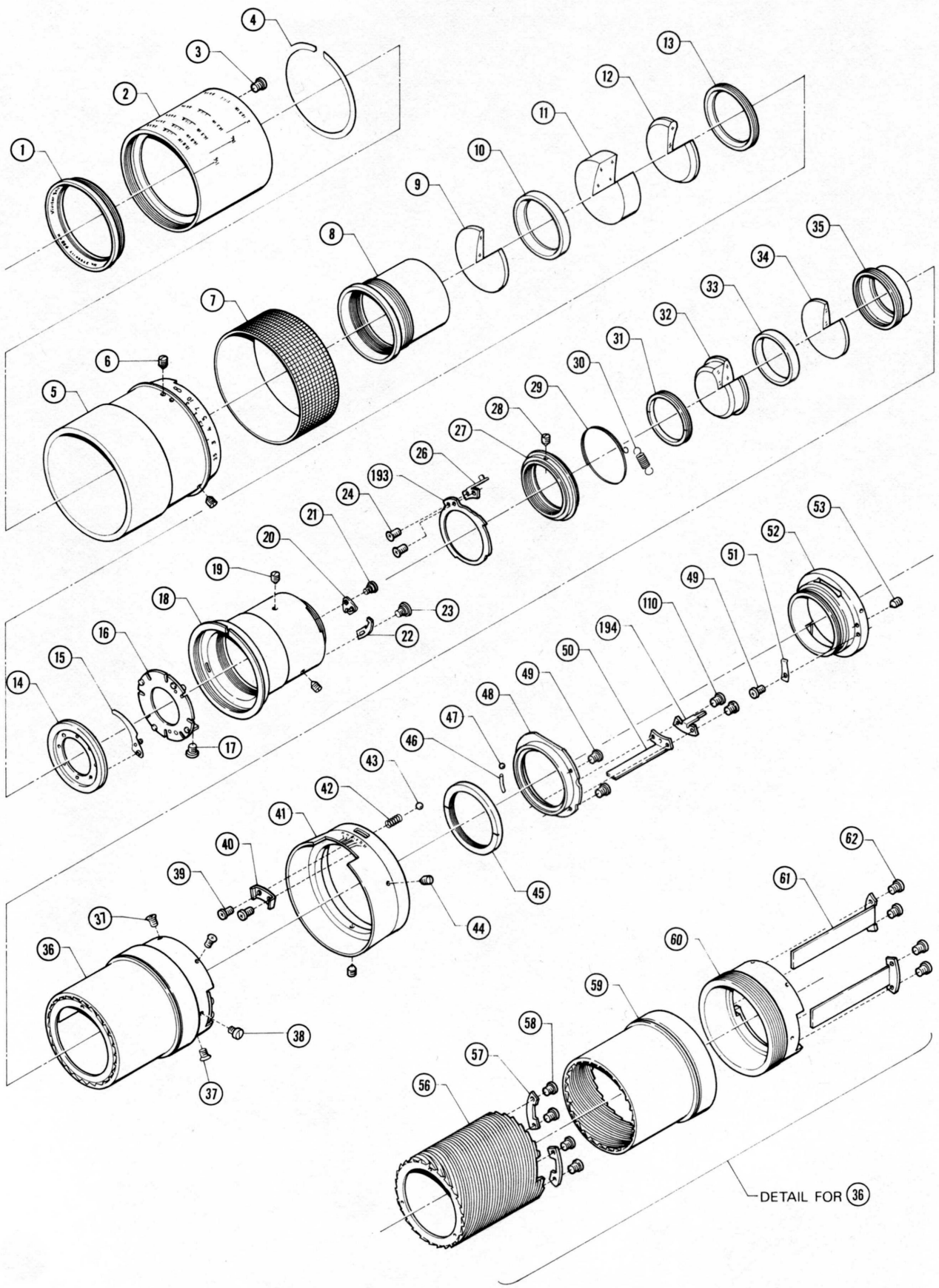
MINOLTA MOUNT



VIVITAR SERIES 1 90MM F2.5 MACRO LENS

CANON MOUNT



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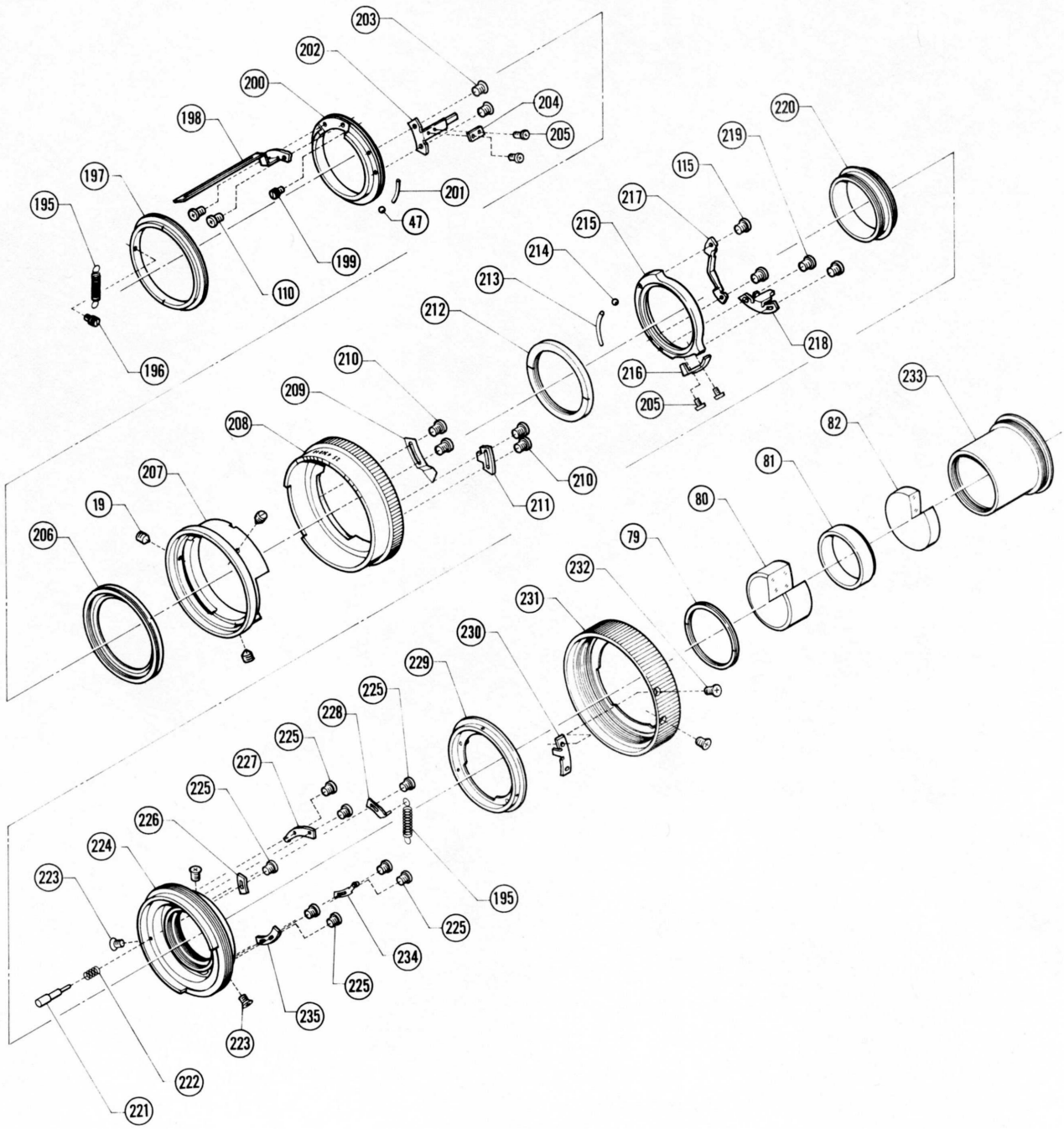

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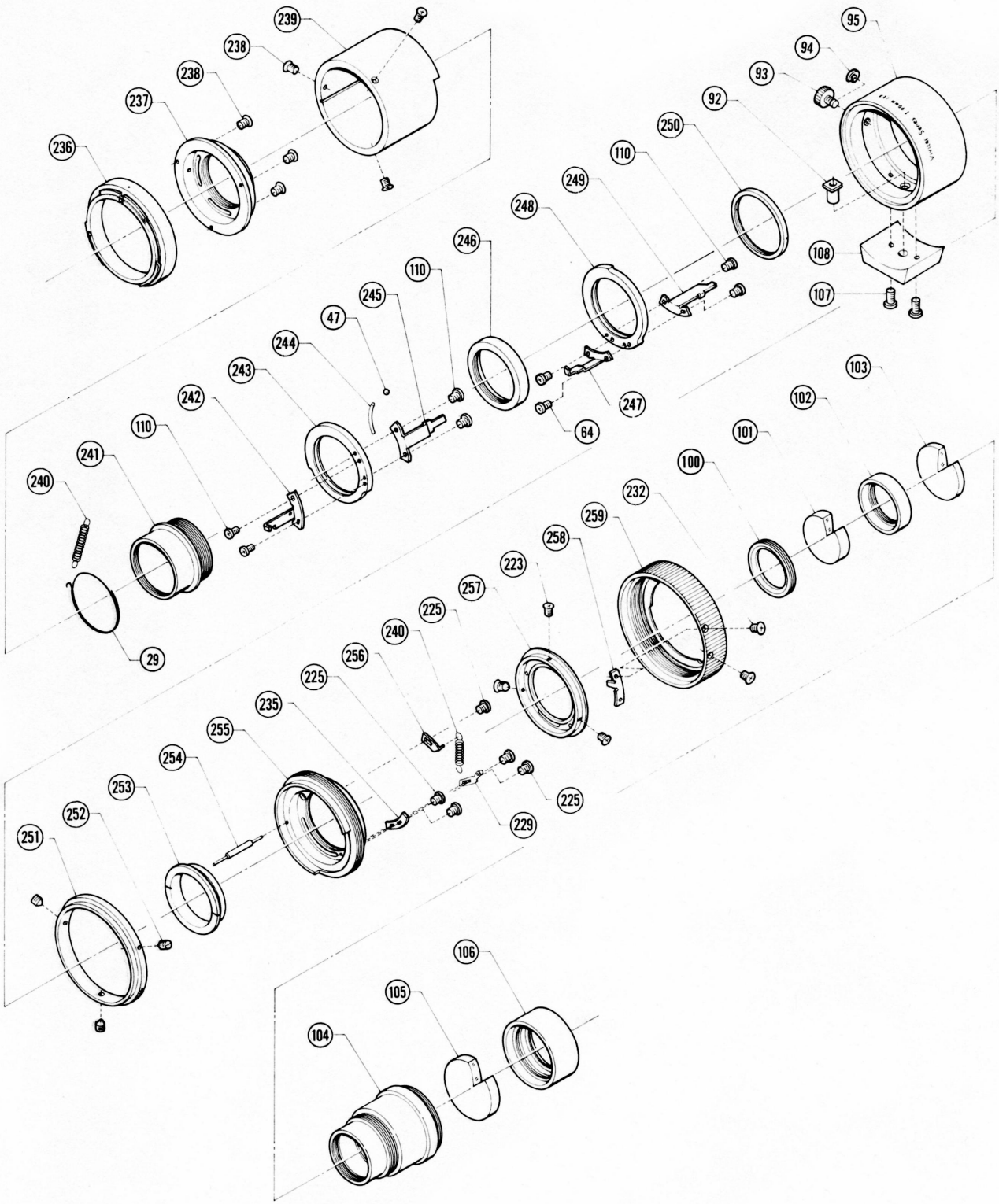
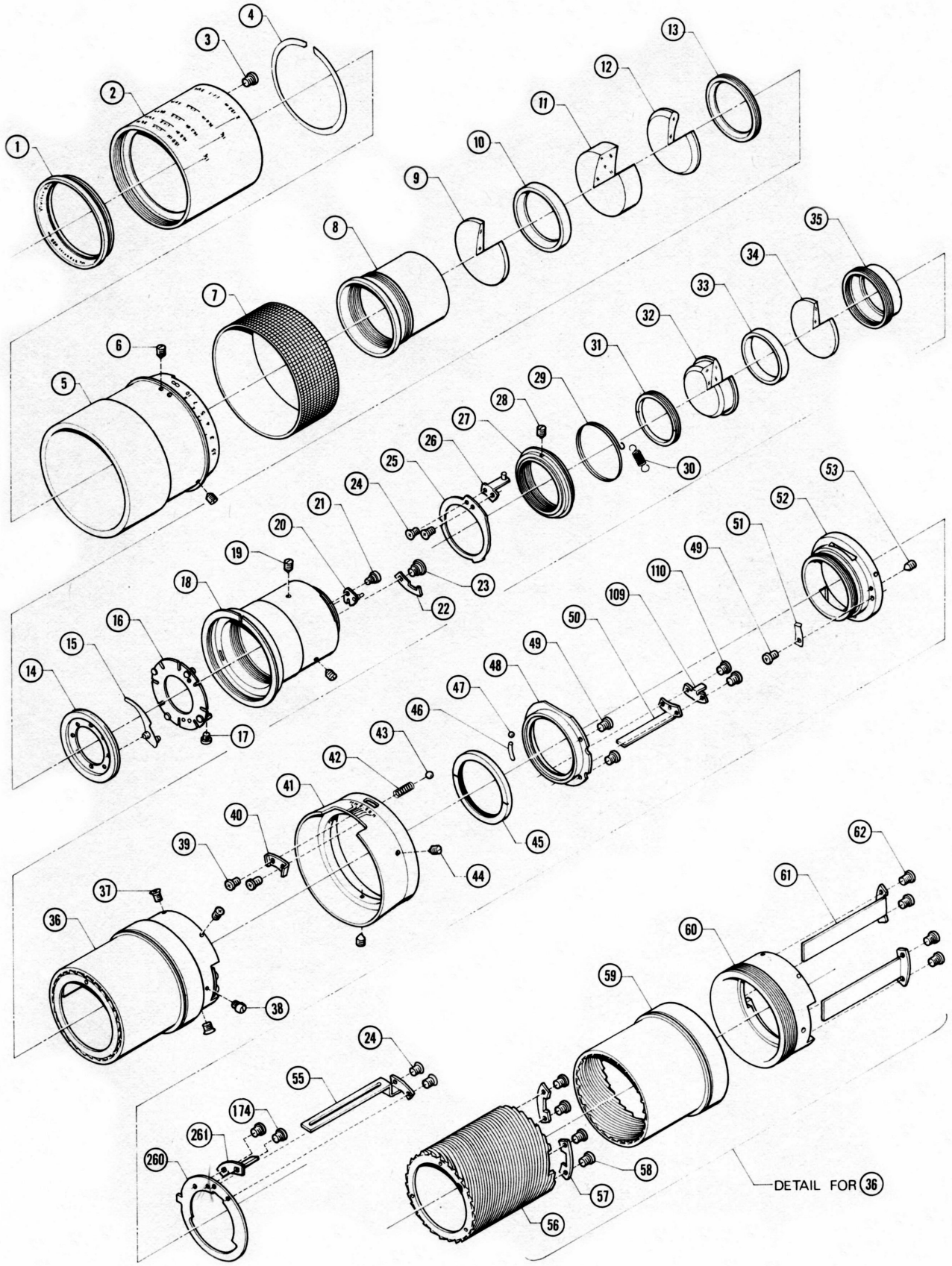
CANON MOUNT



VIVITAR SERIES 1 90MM F2.5 MACRO LENS

OLYMPUS MOUNT



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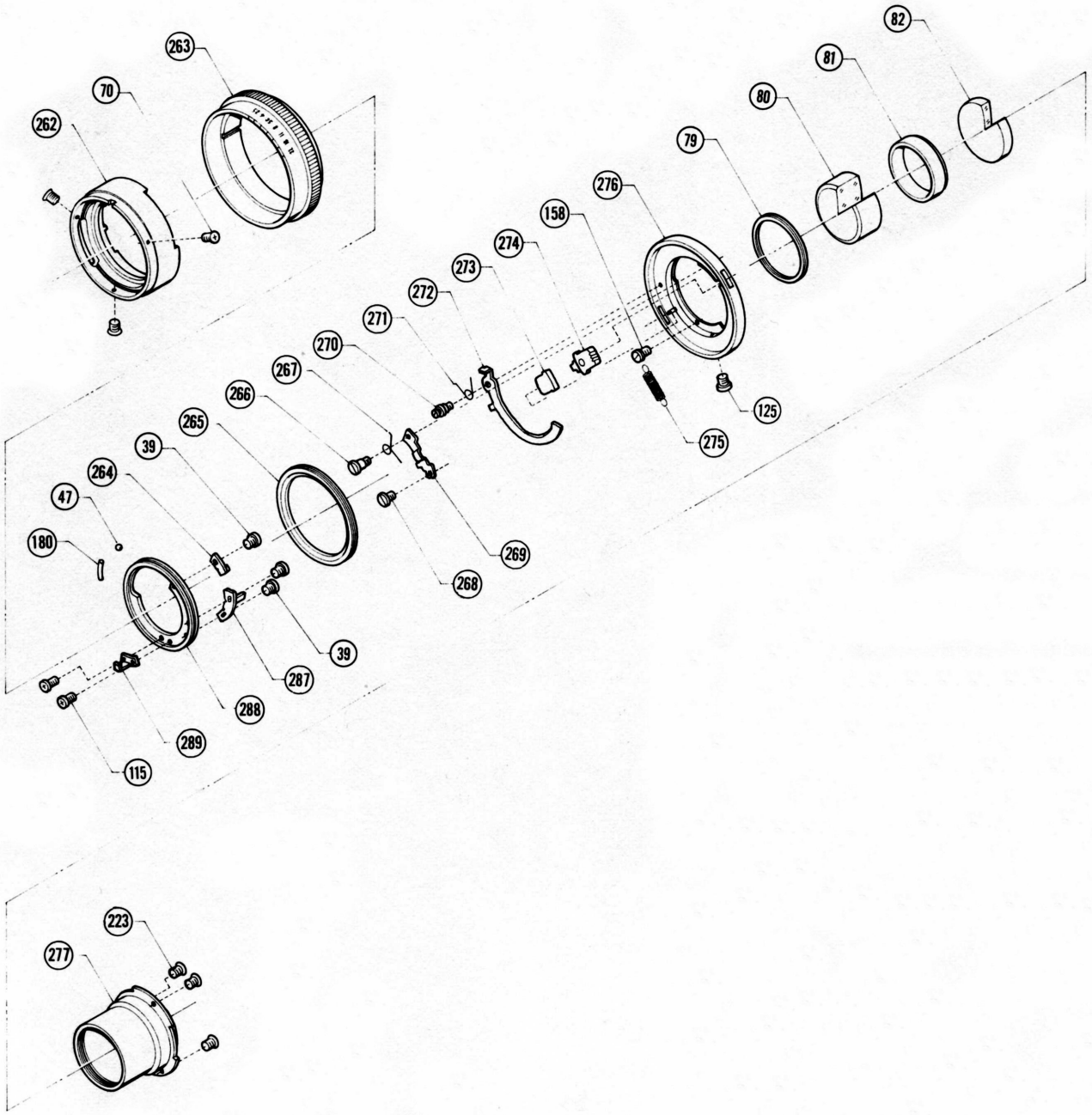
OLYMPUS MOUNT



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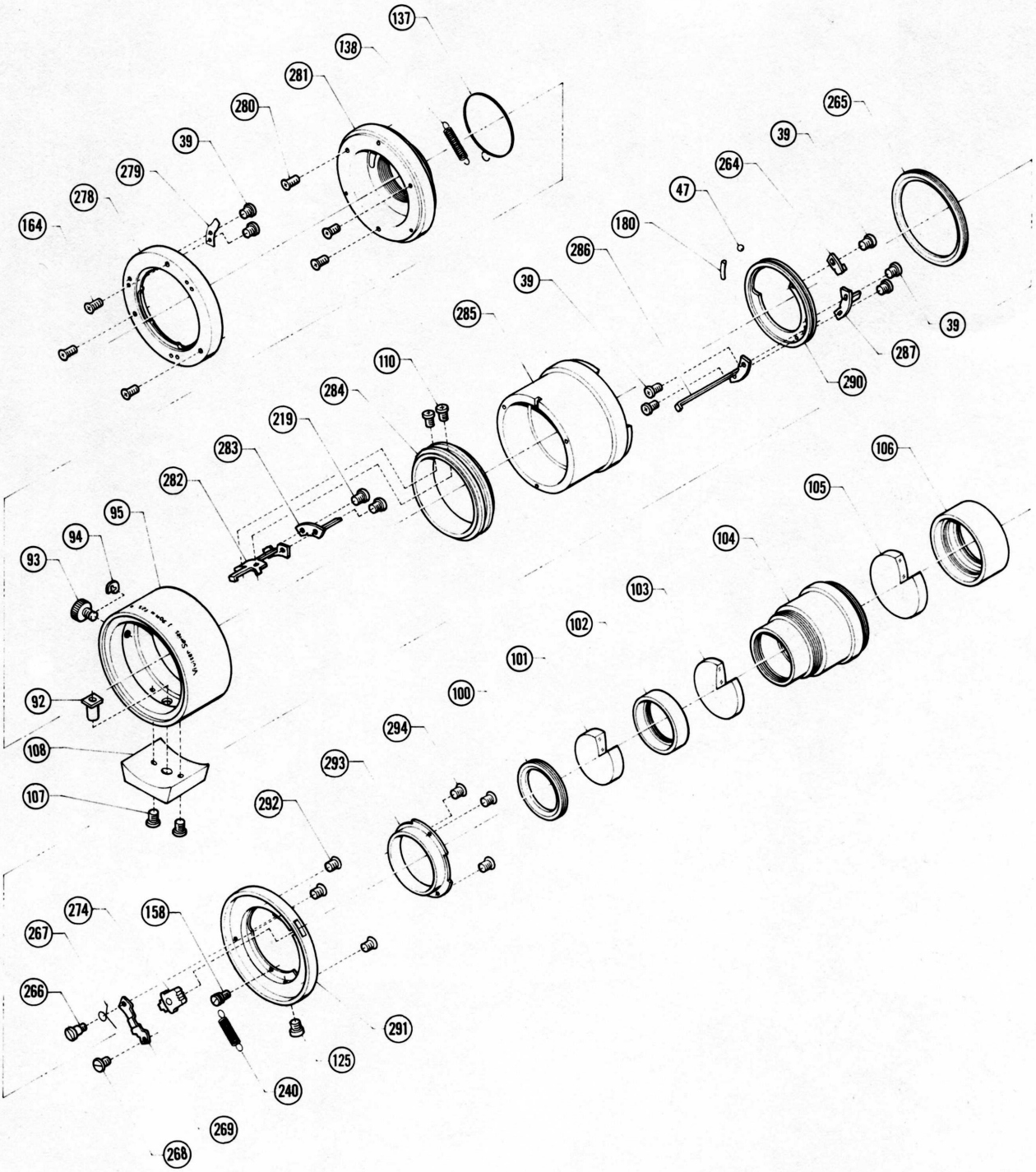
OLYMPUS MOUNT



PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

BEGINNING WITH SERIAL NO. 37------

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U	N	M	C	O
1	RING, NAME	3516000	1	1	1	1	1
2	RING, MAGNIFICATION SCALE	3516001	1	1	1	1	1
3	SCREW, STOP	3516024	1	1	1	1	1
4	SPACER	3516002	A/R	A/R	A/R	A/R	A/R
5	RING, FOCUS SCALE	3516003	1	1	1	1	1
6	SETSCREW (M2.0X2.5)	3512540	3	3	3	3	3
7	GRIP	3516004	1	1	1	1	1
8	FRAME, FRONT LENS GROUP	3516005	1	1	1	1	1
9	LENS ELEMENT, 1st	3516006	1	1	1	1	1
10	SPACER, 1st LENS	3516007	1	1	1	1	1
11	LENS ELEMENT, 2nd	3516008	1	1	1	1	1
12	LENS ELEMENT, 3rd	3516009	1	1	1	1	1
13	RING, RETAINER	3516010	1	1	1	1	1
14	RING, DIAPHRAGM BLADE	3516011	1	1	1	1	1
15	BLADE, DIAPHRAGM	3516012	8	8	8	8	8
16	RING ASSEMBLY, DIAPHRAGM BLADE OPERATING	3516013	1	1	1	1	1
17	SCREW	3512580	1	1	1	1	1
18	DIAPHRAGM HOUSING	3516014	1	1	1	1	1
19	SETSCREW (m1.7X1.5)	3512121	3	3	3	3	3
20	PLATE, LINK	3516015	1	1			1
	PLATE, LINK	3516016			1	1	
21	SCREW, PIVOT	3516025	1	1	1	1	1
22	PLATE, DIAPHRAGM LIMIT	3516017	1	1	1	1	1
23	SCREW	3516026	1	1	1	1	1
24	SCREW (M1.7X2.0)	3512601	4	4	4	2	6
25	CAM, APERTURE	3516018	1	1			
	CAM, APERTURE	3516019			1		
	CAM, APERTURE	3516020					1
26	LEVER, APERTURE CAM	3516021	1	1	1	1	1
27	RETAINER, APERTURE CAM	3516022	1	1	1	1	1
28	SETSCREW (M1.4X1.5)	3512151	1	1	1	1	1
29	ANCHOR SPRING	3516027	1	1	1	1	1
30	SPRING, DIAPHRAGM RETURN	3512678	1	1	1	1	1
31	RING, RETAINER	3516023	1	1	1	1	1
32	DOUBLET, 4th/5th LENS	3516028	1	1	1	1	1
33	RING, SPACER	3516029	1	1	1	1	1
34	LENS ELEMENT, 6th	3516030	1	1	1	1	1
35	FRAME, MIDDLE LENS	3516031	1	1	1	1	1
36	HELICOID ASSEMBLY	3516032	1	1	1	1	1
37	SCREW, FLATHEAD (M1.7X3.5)	3516033	4	4	4	4	4
38	SCREW, STOP	3512567	1	1	1	1	1
39	SCREW, ROUNDHEAD (M1.4X2.5)	3512171	4	7	4	2	11
40	PLATE, FOCUS STOP	3516034	1	1	1	1	1
41	RING, DEPTH OF FIELD	3516035	1	1	1	1	1
42	SPRING, DETENT	3512680	1	1	1	1	1
43	BALL, DETENT 2.0	3516036	1	2	1	1	1
44	SETSCREW (M1.7X3.5)	3516037	3	3	3	3	3
45	RETAINER, RELAY RING	3516038	1	1	1	1	1

PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U	N	M	C	O
46	SPACER, BALL	3516039	8	8	8	8	8
47	BALL, STEEL 1.5	3516040	8	16	12	8	20
48	RING, RELAY	3516041	1	1	1	1	1
49	SCREW (M1.7X1.8)	3516042	3	3	3	3	3
50	LEVER ASSEMBLY B, DIAPHRAGM	3516043	1	1	1	1	1
51	SPRING, FLAT DETENT	3516044	1	1			1
	SPRING, FLAT DETENT	3516045			1	1	
52	FRAME, RELAY RING	3516046	1	1	1	1	1
53	SETSCREW (M1.7X2.5)	3512544	1	4	1	1	1
54	F VALUE PLATE	3516047	1	1	1		
55	LEVER, CAM COUPLING	3516049	1	1	1		1
56	HELICOID, INNER	3516050	1	1	1	1	1
57	PLATE, HELICOID GUIDE	3516051	2	2	2	2	2
58	SCREW	3512630	4	4	4	4	4
59	HELICOID, OUTER	3516052	1	1	1	1	1
60	RING, HELICOID GUIDE	3516053	1	1	1	1	1
61	GUIDE, HELICOID	3516054	2	2	2	2	2
62	SCREW (1.7X3.5)	3512080	4	4	4	4	4
63	SCREW (1.4X2.0)	3512634	4				
64	CLAW, MANUAL	3516055	1				
65	MANUAL RING	3516056	1				
66	SPRING, MANUAL DETENT	3512725	1				
67	SCREW (M1.4X1.8)	3512636	2				
68	LEVER, MANUAL	3516057	1				
69	FRAME, MOUNT	3516058	1				
70	SCREW (M1.7X3.0)	3516059	3	3	3	3	3
71	RING, APERTURE	3516060	1				
72	CRANK ASSEMBLY, APERTURE	3516061	1				
73	SPRING, APERTURE CRANK	3516062	1				
74	SCREW	3512574	3				
75	SPRING, APERTURE PIN	3516063	1				
76	PIN, APERTURE	3516064	1				
77	MOUNT, UNIVERSAL	3516065	1				
78	SCREW, FLATHEAD	3516066	4	4			
79	RING, RETAINER	3516067	1	1	1	1	1
80	LENS ELEMENT, 7th	3516068	1	1	1	1	1
81	RING, SPACER	3516069	1	1	1	1	1
82	LENS ELEMENT, 8th	3516070	1	1	1	1	1
83	FRAME, REAR LENS GROUP	3516071	1				
84	SCREW, FLATHEAD (M1.4X3.0)	3512613	3	3	3	3	
85	RING, MOUNT	3516072	1				
86	PIVOT, PUSH PLATE	3516073	1				
87	PLATE, PUSH	3516074	1		1		
88	SCREW	3512708	4		3		

PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U	N	M	C	O
89	RIM, ADAPTER LENS MOUNT	3516075	1				
90	SETSCREW (M1.7X2.0)	3512131	6				
91	ADAPTER BODY	3516076	1				
92	SOCKET, TRIPOD	3516077	1	1	1	1	1
93	KNOB, CLAMPING	3516078	1	1	1	1	1
94	E RING	3516079	1	1	1	1	1
95	RING, TRIPOD	3516080	1	1	1	1	1
96	RING, SPACER	3516081	1				
97	PIN, ACTUATOR	3516082	1				
98	MOUNT, ADAPTER	3516083	1				
99	SCREW (M1.7X4.5)	3516084	4				
100	RING, RETAINER	3516085	1	1	1		
101	LENS ELEMENT, 9th	3516086	1	1	1	1	1
102	RING, SPACER	3516087	1	1	1	1	1
103	LENS ELEMENT, 10th	3516088	1	1	1	1	1
104	FRAME, ADAPTER LENS	3516088	1	1	1	1	1
105	LENS ELEMENT, 11th	3516090	1	1	1	1	1
106	RING, RETAINER FOR 11th LENS	3516091	1	1	1	1	1
107	SCREW	3516092	2	2	2	2	2
108	BASE, TRIPOD MOUNT	3516093	1	1	1	1	1
109	LEVER ASSEMBLY C	3516094		1	1		1
110	SCREW	3516095		6	2	8	4
111	FRAME, MOUNT	3516096		1			
112	SCREW (M1.7X8.0)	3516097		1	6		
113	APERTURE RING	3516098		1			
114	PLATE, METER COUPLING	3516099		2			
115	SCREW	3512633		8	8	2	2
116	RING, BALL RETAINER	3516100		1			
117	LEVER, ROTATING	3516101		1			
118	POST, SPRING	3516102		1			
119	RING, ROTATING	3516103		1			
120	SPACER, BALL	35163661		6	6		
121	LEVER, ACTUATOR	3516104		1			
122	RING, BALL RACE	3516105		1			
123	MOUNT, NIKON	3516106		1			
124	SCREW	3516107		3			
125	SCREW, MOUNT	3500059		8			2
126	SCREW, STOP (M1.4X1.2)	3512582		2			
127	FRAME, REAR LENS GROUP	3516108		1			
128	FLANGE, NIKON BODY	3516109		1			
129	PIN, LOCKING	3516110		1			
130	PLUNGER, LOCKING PIN	3516111		1			
131	SPRING, PLUNGER RETURN	3516112		1			
132	BUTTON, MOUNT RELEASE	3516113		1			
133	RING ASSEMBLY, F VALUE	3516114		1			
134	RING, DRESSING	3516115		1			
135	SPRING, DETENT	3516116		1			
136	RIM, LENS MOUNT ADAPTER	3516117		1			
137	SPRING, ANCHOR	3516118		1	1		1
138	SPRING, RETURN	3516119		1	1		1

PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U	N	M	C	O
139	LEVER (A) F VALUE RELAY	3516120		1			
140	LEVER (B) F VALUE RELAY	3516121		1			
141	RING, ADAPTER INTERMEDIATE	3516122		1			
142	BODY, NIKON ADAPTER	3516123		1			
143	SPRING, DETENT 2.0	3512679		1			
144	RING, BALL RETAINER	3516124		1			
145	LEVER, ADAPTER ACTUATOR	3516125		1			
146	RING, ADAPTER ACTUATOR LEVER	3516250		1			
147	LEVER, ACTUATOR	3516126		1			
148	RING, BALL RACE	3516127		1			
149	RING, APERTURE RELAY	3516128		1			
150	RING, ADAPTER MOUNT	3516129		1			
151	SETSCREW (1.4X1.75)	3512547		1			
152	TUBE, SHADE	3516130		1			
153	FRAME, MOUNT	3516131			1		
154	RING, APERTURE	3516132			1		
155	RING, BALL RETAINER	3516133			1		
156	CRANK ASSEMBLY, ACTUATOR	3516134			1		
157	SPRING, ACTUATOR CRANK	3516135			1		
158	POST, SPRING	3512715			1		2
159	ROTATING LEVER	3516136			1		
160	LEVER, ACTUATOR	3516137			1		
161	SCREW	3512119			3		
162	PLATE, SPRING HOOK	3516138			1		
163	MOUNT, MINOLTA	3516139			1		
164	SCREW	3516140			8		3
165	FRAME, REAR LENS GROUP	3516141			1		
166	FLANGE, MINOLTA MOUNT BODY	3516142			1		
167	RING, F VALUE	3516143			1		
168	RIM, LENS MOUNT ADAPTER	3516144			1		
169	SPRING, MOUNT LATCH	3516145			1		
170	PLATE, ROTATION STOP	3516146			1		
171	PIVOT, LATCH	3516147			1		
172	LATCH, MOUNT	3516148			1		
173	SPRING, LATCH GUIDE	3516149			1		1
174	SCREW	3516150			2		2
175	SHAFT, LATCH PIVOT	3516151			1		
176	RIM, ADAPTER LENS MOUNT	3516152			1		
177	SCREW	3512599			2		
178	CLAW, DIAPHRAGM LEVER (A)	3516153			1		
179	LEVER (A) DIAPHRAGM	3516154			1		
180	SPACER, BALL	3512670			6		1
181	RING, INTERMEDIATE DIAPHRAGM (A)	3516155			1		
182	ADAPTER BODY	3516156			1		
183	SPACER, BALL	3512031			6		
184	SCREW, LIMIT	3516157			1		
185	APERTURE RING, ADAPTER	3516158			1		
186	RING, BALL RETAINER	3516159			1		
187	POST, SPRING	3516160			1		

PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U	N	M	C	O
188	RING, ADAPTER ACTUATOR LEVER	3516161			1		
189	LEVER, ADAPTER ACTUATOR	3516162			1		
190	MOUNT, MINOLTA ADAPTER	3516163			1		
191	TUBE, SHADE	3516164			1		
192	LEVER (A) ROTATING	3516165			1		
193	CAM, APERTURE	3516166				1	
194	LEVER (C) DIAPHRAGM	3516167				1	
195	SPRING	3512663				2	
196	POST, SPRING	3516168				1	
197	RING, BALL RETAINER	3516169				1	
198	LEVER, CAM COUPLING	3516170				1	
199	SCREW, STOP	3516171				1	
200	RING, BALL	3516172				1	
201	SPACER, BALL	3512636				6	
202	LEVER, APERTURE SETTING	3516173				1	
203	SCREW	3512602				2	
204	HOLDER, COUPLER	3516174				1	
205	SCREW	3512142				6	
206	RING, BALL RETAINER	3516175				1	
207	FRAME, CANON MOUNT	3516176				1	
208	RING, APERTURE	3516177				1	
209	PLATE, E E CAM	3516178				1	
210	SCREW	3516179				4	
211	PLATE, CAM COUPLING	3516180				1	
212	RING, COUPLING	3514159				1	
213	SPACER, BALL	3516181				10	
214	BALL, STEEL 1.2	3512899				10	
215	RING, COUPLING	3516183				1	
216	LEVER, COUPLING	3516184				1	
217	PLATE, MANUAL	3516185				1	
218	LEVER, MANUAL	3516186				1	
219	SCREW	3516187				2	2
220	BALL RACE (C)	3516188				1	
221	PIN, EE SWITCH	3514174				1	
222	SPRING, EE SWITCH PIN	3512682				1	
223	SCREW	3512618				3	3
224	MOUNT, CANON	3516189				1	
225	SCREW (1.4X1.8)	3512123				13	
226	PLATE, STOP	3516190				1	
227	SPRING, MANUAL LEVER DETENT	3516191				1	
228	HOOK, SPRING A	3516192				1	
229	LATCH, LOCKING RING	3516193				1	
230	LEVER, SIGNAL	3516194				1	
231	RING, LOCKING	3516195				1	
232	SCREW (1.4X2.2)	3512675				4	
233	FRAME, REAR LENS GROUP	3516196				1	
234	SPRING	3516197				1	
235	PLATE, STOP	3516198				2	
236	MOUNT, CANON ADAPTER	3516199				1	
237	RIM, LENS MOUNT ADAPTER	3516200				1	

PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U	N	M	C	O
238	SCREW (M2.0X4.5)	3516201				6	
239	BODY, ADAPTER	3516202				1	
240	SPRING, RETURN	3512641				2	2
241	RING, INNER BALL RACE	3516203				1	
242	LEVER, APERTURE COUPLING	3516204				1	
243	RING, COUPLING LEVER	3516205				1	
244	SPACER, BALL	3516206				4	
245	LEVER, APERTURE SETTING	3516207				1	
246	RING, BALL RETAINER	3516208				1	
247	LEVER, A/M TRANSFER	3516209				1	
248	RING, A/M LEVER	3516210				1	
249	LEVER, A/M	3516211				1	
250	RING, BALL RETAINER	3516212				1	
251	RING, DRESSING	3516213				1	
252	SETSCREW	3516214				3	
253	TUBE, SHADE	3516215				1	
254	PIN, EE SWITCH TRANSFER	3516216				1	
255	MOUNT, CANON ADAPTER	3516217				1	
256	HOOK, SPRING	3516218				1	
257	RING, SENSE PIN	3516219				1	
258	LEVER, SIGNAL	3516220				1	
259	RING, LOCKING	3516221				1	
260	CAM, APERTURE	3516222					1
261	LEVER, APERTURE	3516223					1
262	FRAME, MOUNT	3516224					1
263	RING, APERTURE	3516225					1
264	PLATE, STOP	3516226					1
265	RING, BALL RETAINER	3516227					2
266	SCREW, SHAFT	3500080					2
267	SPRING, LOCK BUTTON	3500079					2
268	SCREW	3512707					2
269	PLATE, LOCK BUTTON RETAINER	3516228					2
270	SHAFT, MANUAL LEVER	3500071					1
271	SPRING, MANUAL LEVER RETURN	3500072					1
272	LEVER, MANUAL	3516229					1
273	BUTTON, MANUAL	3516230					1
274	BUTTON ASSEMBLY, LOCK	3516231					2
275	SPRING, COUPLING RING	3516232					1
276	MOUNT, OLYMPUS	3516233					1
277	FRAME, REAR LENS GROUP	3516234					1
278	FLANGE, OLYMPUS MOUNT	3516235					1
279	SPRING, LENS MOUNT TENSION	3516236					1
280	SCREW	3516237					3
281	RIM, ADAPTER LENS MOUNT	3516238					1
282	ARM, F-VALUE	3516239					1
283	LEVER, APERTURE	3516240					1
284	RING (A), INTERMEDIATE DIAPHRAGM	3516241					1
285	BODY, ADAPTER	3516242					1
286	LEVER, COUPLING	3516243					1
287	LEVER, APERTURE	3516244					1

PARTS LIST

VIVITAR SERIES 1 LENS 90mm f/2.5 MACRO

REF. NO.	DESCRIPTION	PART NUMBER	MOUNT & QUANTITY U N M C O
288	RING, COUPLING	3516245	1
289	LEVER, ROTATING	3516246	1
290	RING, ADAPTER COUPLING	3516247	1
291	FLANGE, OLYMPUS LENS MOUNT	3516248	1
292	SCREW	3512597	3
293	TUBE, SHADE	3516249	1
294	SCREW	3512618	3

Vivitar

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